

Journal of Business

Volume 04, Issue 01, 2019: 17-28 Article Received: 07-08-2019 Accepted: 23-08-2019 Available Online: 17-09-2019 ISSN 2380-4041(Print), ISSN 2380-405X(Online) DOI: http://dx.doi.org/10.18533/job.v4i1.118

Investigating the Impact of Environmental and Organizational Factors on the Adoption of Social Networking Sites (SNSs)

Md. Ziaul Haque¹, Aimin Qian², Taslima Akther³

ABSTRACT

The way of communication and pattern of doing business have been changed remarkably due to adoption of social networking sites intensively in daily life. This study attempts to unveil the impact of environmental and organizational factors on SNSs adoption among the institutional investors in Bangladesh. By using structured online questionnaires, data were collected from the institutional investors. Partial least square based structural equation modeling (PLS-SEM), a variance based statistical analysis technique, was used to analyze the data. It explored that environmental and organizational factors are significant antecedents to adopt the social networking sites (SNSs) among the institutional investors. Remarkably, it found that environmental factors have significant impact on organizational factors during the adoption of SNSs among the institutional investors. Most remarkable finding is observed that environmental factors are more robust predictor than organizational factors during the adoption of SNSs. This study will enrich the existing literature by incorporating organizational and environmental factor as direct determinants of intention to use as well as TOE. It will help institutional investors to formulate strategy regarding the adoption of SNSs in institutional context.

Keywords: Environmental, Organizational, Institutional, Investors, SNSs, Adoption. This is an open access article under Creative Commons Attribution 4.0 License.

1. Introduction

In recent years, the manner of information accessed, stored and dissemination has considerably altered due to rapid advancement of information and communication technology (ICT). In the twenty first century, blending the innovative technology solution to achieve sustainability and competitive advantage in organization is substantially inevitable (Howell, 2016; Kripanont, 2007). Having one or more accounts in social networking sites has become one of the growing activities in the internet since SNS has been emerged as one of the new technologies (Alarc_on-del-Amo et al., 2014). Boyd and Ellison (2007, p. 211) define SNSs as a "web-based

¹ Business School, University of International Business and Economic, Beijing, China and Faculty of Business Administration, Noakhali Science and Technology University, Noakhali, Bangladesh. Email: zia10093@yahoo.com

² Business School, University of International Business and Economic, Beijing, China. Email: amyqian@uibe.edu.cn

³ School of Management, Wuhan University of Technology, Wuhan, P.R China and Department of Accounting & Information Systems, Jagannath University, Bangladesh. Email: limaais.du@yahoo.com

services that allow individuals to: construct a public or semi-public profile within a bounded system; articulate a list of other users with whom they share a connection with; and view and traverse their list of connections and those made by others within the system."

Like other settings, academician and scientific community can develop professional online platform by using academic SNSs (Donelan, 2015) as well as find new information, disseminate new ideas and communicate with peers (Palmer and Strickland, 2017). In some countries, SNSs are gaining more popularity in comparison to search engines (O'Dell, 2010). Organization will be highly benefited from the effective use of SNSs (Weerasinghea et al., 2018). Many organizations implement the social network in order to generate combined intelligence, smooth collaborative work (Cross et al., 2002) and nurture innovation (Bradley and McDonald, 2011). Due to outstanding adoption rate of social media, the way of communication and doing business have changed in a revolutionary manner (Mikalef et al., 2012). Early adopters of social media are satisfied with their investment activities (McKinsey, 2007). Recent industry reports advocate that usage of social media may affect businesses' bottom line significantly therefore, social media is not only becoming the vital component of the business strategy but also attracting more investments (Power, 2013).

Social media has had an enormous impact on businesses. Platforms such as Twitter, YouTube and Facebook are used not only to promote brands and advertise new products but also are effective media that provide customer service and resolve disputes (Petersen, 2019). One of the survey report unveil that 73% of recruiters have searched candidates through social media (Wood, 2014). Many organizations are using social media to foster customer relationships and to develop brand which increase the firm's equity value (Luo et. al., 2013).

On the other hand, organizations are using social media tremendously. In recent times, most of the organization are creating and maintain social networks sites public pages to develop virtual relationship with different stakeholders, to increase their presence and to optimize the organizational interest. Though, some scholars tried to explore, organizational improvisation through tencent messaging systems (Du et al, 2019), assimilation of social media in firms (Bharati et al., 2014), improvement of organizational communication through social media (Stanko and Sena, 2017), strategic value of organizational social networking systems adoption (Karoui et al., 2015), utlizaiton of social media services in corporate sectors (Jung et al., 2015), adoption of social media services for corporate communication (El - Haddadeh et al., 2012), adoption of social media for organizational purpose (Schlagwein and Hu, 2017). Major portion of previous social media usage studies focused on the individual perspective while some emphasized on the organizational perspective in different context. However, to the best of my knowledge, no study has investigated the impact of environmental and organizational factors on SNSs adoption among the institutional investors. Considering these theoretical gap, the following research question is formulated: How can environmental and organizational factors of social networking sites affect the adoption of SNSs among institutional investors?

The remainder of the paper is arranged as follows: In the next section presents technology organization framework and literature on environmental and organizational aspect for technology adoption. Afterwards, the proposed research model and hypothesis are discussed followed by research method. Data analysis section is preceded to discussion. After that, the paper discusses the theoretical and managerial contribution before concluding with limitation and future research.

2. Literature review and hypothesis development

2.1 Technology-Organization-Environment (T-O-E)

Tornatzky and Fleischer (1990) proposed TOE (Technology-Organization-Environment) framework that postulates some generic factors to discuss the likelihood of information systems adoption. This theory assumed the adoption of organizational systems are determined by environmental aspect (Kowath and Choon, 2001), organizational aspects (Chatterjee, et al., 2002) and technological aspects (Kauffman and Walden, 2001). Technological context stated that a bunch of technologies (internal and external) determines the adoption capabilities of firms. Organizational context describes that adoption capabilities of firm are determined by a lot organizational factors such as firm's business scope, top management support, organizational culture, organizational physical environment, organizational technological facilities, training and learning opportunities etc. (Jeyaraj, et al., 2006; Sabherwal et al., 2006; Tornatzky & Fleischer, 1990). Environmental context captures the facilitating and inhibiting factors in areas of operations. Significant amongst them are competitive pressure, coercive pressure, normative pressure, socio-cultural issues, government encouragement, and technology support infrastructures such as access to quality ICT consulting services (Al-Qirim, 2006; Jeyaraj et al., 2006; Scupola, 2009; Zhu, et al., 2003, Bharati et al., 2014). The major snag of T-O-E is that some of the constructs in the adoption predictors are assumed to apply more to large organizations than to small organization. However, majority of the IT adoption related studies such Davis et al. (1989), DeLone and McLoene (1992) and Vekatesh et al. (2003) focused on technological aspect of TOE to explore the IT adoption in organizational settings. The research focusing on environmental and organizational aspect of TOE for SNSs adoption is rare.

2.2 Reviews on environmental and organizational factors for IT adoption

Environmental factor are powerful predictor of IS/IT adoption. Rival pressure appears to raise its likelihood in a firm. It is happened because capabilities of non-adopters in this areas enabled by the SNSs might be perceived to be lower or actually be lower than those of adopters (Ngai, 2006). Under Coercive pressure, firms tend to be more careful about the action of policy making as it is influenced by government, industry associations, professional networks, and powerful clients and suppliers. Under mimetic pressure, firms mimic other organizations in order to cope with uncertainty and save on search and other learning costs (Bharati et al., 2014). It is often associated with the bandwagon effect, as described by Staw and Epstein (2000). In other words, the greater the extent of the adoption in a sector, the greater the chance a firm in that sector will adopt the innovation. The chance will be further heightened when a firm perceives the successful adoptions of its competitors (Teo et al., 2003; Indushobha and Duchessi, 1999; Srinivasan et al., 2002; Warrts et al., 2002). Under normative pressure, firms try to hold a common set of norms, values and cognitive models that leads the organization to cope with other professionals (DiMaggio and Powell, 1983).

Organizational resources are other major determinants of technology particularly the social networking technologies adoption in the organizations. Organizational resources refer to the degree of resources available to an organization for adopting an innovation (Ngai, 2006). Such capability attained or to be acquired in a foreseeable future reflects the adoption readiness of a company. Iacovou et al. (1995) highlight this organizational readiness in terms of financial and technological resources. Financial readiness refers to capital available for initiating and financing the on-going costs of an innovation adoption. Technological readiness generally refers to how sophisticated a company is in terms of technology usage and management. Research results indicate that resources are critical concerns affecting the adoption of technology (Dewan and Michael, 1998; Lind et al., 1989; Warrts et al., 2002).

Moreover, to maintain the competitive advantage, situational context e.g., environmental, location, time and organization attributes play an important role. Situational context indicated the environment that surrounds a person prior to use the technology. The environmental attributes implies the light, temperature and immediate physical environment around the employees during the use of technology and events attributes indicates the temporal setting. Location attributes includes culture, regional economy and organizational competition. Organizational attributes includes climates, leadership and collective technology use where overall functions characteristics, and features of technology play an important role for technology adoption and continued use (Venkatesh et al, 2016; Shaw et al, 2018).

2.3 Research model and hypothesis

The literature review in above provides two important dimensions of social networking sites determinants, namely environmental factors and organizational factors. In line with the two dimensions, we established a research model (Figure 1) which consisted of the two influential predictors of social networking sites (SNSs) adoption. The following section discuss the theoretical logic for development of hypothesis

When organization experiencing extensive competition from environment, they show higher rate of technology adoption (Gatignon and Robertson, 1989; Teo et al., 2003; Warrts et al., 2002). Firms tend to be more responsive and cautious about the different activities of its competitors and regulators and interested to adopt new technologies in these circumstances because they will be in pressure from the respective stakeholder (Ngai, 2006). Social networking sites exhibit such types of phenomena.



Figure 1. Research Model

When firms tend to adopt SNSs for their activities they can bring competitive advantage in terms of better decision making or operational efficiency. Moreover, mimetic pressures indicate symbolic, cognitive and cultural aspects of organizational environments (DiMaggio & Powell, 1983). It reinforces the common beliefs of actors among the peers (Scott, 2008). These elements may also influence the motivation of actors to be part of organizational virtual social network (OVSN) (Zhu & Chang, 2014). Normative pressures comprise ways to achieve goals or objectives and presuppose convergence between ideas, beliefs and goals (Hsu et al., 2014). This kind of pressures may constrain social behavior or enable actions, giving responsibilities and defining functions (Scott, 2014). Coercive or regulatory pressures Constraint and enable behavior, these rules result in sanctions, increase power or give benefits to actors (Scott, 2014). These pressures highlight politics and strategies that influence technology adoption (Hsu et al., 2014). Mimetic, normative and Coercive pressures work through top management in ERP assimilation (Liang et al., 2007) and social media assimilation (Bharati et al., 2014). In these circumstances, we are also thinking environmental factors positively motivate the institutional investors to use social networking sites. Thus the following hypothesis is postulated

H1: Environmental factors will positively affect the likelihood of online social networking sites adoption of institutional investors.

Different types of organizational resources influence the adoption of technologies in organization (Ngai, 2006). Technical resource readiness determines the capability of organization to adopt the technology (Iacovou et al., 1995; Kuan and Chau, 2001). Firms which have the technical infrastructure and manpower are more ready for the adoption of online retailing (Ngai, 2006). Hoppen and Bobsin (2015) explored that organizational support and resource are important to aid the activities of the organization which influence the adoption of organizational virtual social networks. Moreover, Munguatosha et al. (2011) identified technical support, administrative support, system interactivity and infrastructures are significant ingredients for social networking adoption in organization. Extant research also found facilitating condition similar to organization attribute of situational context has positive impact on user intention to use technology (Hoque and Sarwar, 2017; Tak and Panwar, 2017). Liang et al. (2010) explored the technological and complementary organizational resources as organizational resources and also measured the firm performance through these indicators. In addition, Ravichandran and Lertwongsatien (2005) identified a positive relationship between firms IT resources and IS capabilities. In line with this argument, organizational resources are likely to facilitate an organization's adoption of social networking sites. Hence, firms with a higher availability of organizational resources are more likely to adopt SNSs

H2. Organizational resources will positively affect the likelihood of online social networking sites adoption among the institutional investors

Organization's propensity to innovate is shaped by environmental opportunities and threats. Strong correlation exists between a firm's decision to use technologies and such industry or environmental factors (Raymond and Blili, 1997). Innovative organizations seek opportunities to upset industry equilibrium; pursue strategies to disrupt normal course of industry events and to forge new industry conditions to the disadvantage of competitors (Macmillian, 1982). In line with this argument, we also believe that environmental factors influence the organizational factors to adopt the social networking sites. Hereafter, the following hypothesis is developed

H3. Environmental factors positively affect the organizational factors to adopt the SNSs among institutional investors.

Organizations are viewed as specialized arena in an institutional field (DiMaggio & Powell, 1983) that are comprised of different environmental factors including regulative, normative, and cultural cognitive elements (Scott, 2008). When the organization operates within an industry, it must comply with the respective laws and norms of the industry. It may happen that firms can operate its activities even with less organizational resources but they must comply with environmental indicators. It implies environmental factors are more important for organization to adopt the technologies. In line with these statements, we also believe that environmental factors have more influence than organizational factors on adoption of SNSs among the institutional investors. Hence, we can assume

H4. Environmental factors are stronger predictor than organizational factors to adopt the SNSs among institutional investors.

3. Research method

3.1 Measurement

With a view to operationalize the research model, most of the latent constructs measures were developed from prior research and revised their language in order to represent the measurement of these constructs for social networks sites users particularly capital market institutional investors of Bangladesh. We adopted three items for intention to use SNS from Davis et al., (1989) and Venkatesh et al., (2012). Three items for measurement of environmental factors were adopted from Bharati et al., (2014) and Liang et al., (2007). Organizational factors were measured by three items validated by Venkatesh et al, (2016) and Shaw et al., (2018). The scale of items was measured on a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". The details of each constructs, items and sources are given in Table 1.

3.2 Data collection

To test the proposed research model and hypothesis, we selected the institutional investors of capital market in Bangladesh as the research settings. The sample frame of this study is 13,182 institutional investors enlisted in CDBL website. A survey of different merchant banks and other institutions in Dhaka, Bangladesh, was conducted. Data of this study was collected through a structured questionnaire which has two parts. Part A contains basic questions and demographical data of the organization and Part B contains measurement items adopted from previous literature. The study employed a web-based survey in order to collect the data. The email address of different institutional investors was collected from Bangladesh Securities and Exchange Commission (BSEC). A structured questionnaire was developed in Google form and the link of this form sent to email address explaining the purpose of this email as well as providing proper assurance to maintain their confidentiality. After four follow-up contacts by e-mail, we secured the cooperation of 103 companies who are institutional investors in Bangladesh. Due to some missing information we gave up 5 responses and finally took 98 responses for analysis.

3.3 Data analysis

A widely accepted statistical technique namely structural equation modeling (SEM) was used to validate the proposed model with survey data. SEM represents the statistical general linear modeling extensively. Most of the time SEM is used to explore the association between measurement items which are specified by different indicators and latent constructs. Structural equation modeling consist of two evaluation model namely measurement model and path model. "Path models are an extensive form of multiple regression model in which various multiple regression are estimated simultaneously" (Cohen et al, 2013). First, collected data through questionnaire were inputted into Microsoft Excel. Then data were imported into SmartPLS (3.0 version) software for statistical analysis.

Table 1.

Constructs	Corresponding Items	Adopted from
	EF1: Competitors who are important to us think that SNS technologies are	Bharati et
Environmental	useful for investment related activities	al (2014),
Factors (EF)	EF2: The Government's promotion of Information Technology influences	Liang et al.
	our firm to use SNSs	(2007)
	EF3: The competitive conditions in industry require our firm to use SNS	
	technologies	
Organizational	OF1: Organization has the necessary resources to use SNSs services for	Venkatesh et
Factors	investment activities.	al (2016),
(OF)	OF2: Organizational leadership is supportive to use SNS technologies for	Shaw et al
	investment activities.	(2018)
	OF3: Organizational culture and environmental attributes (e.g., location,	
	temperature, light) are favorable for SNSs use.	
Intention to	IT SN1. Organization has high intention to use SNSs service for investment	Davis et al
Use SNSs	in the future.	(1989),
(IT SN)	IT SN2. Organization will always try to use SNSs service in investment	Venkatesh et
	decision.	al. (2012)
	IT SN3. Organization plan to use SNSs service in capital market investment	
	frequently.	

(Summary of measurement items)

4. Analysis and Results

4.1 Demographic profile of sample

Among the respondents 82 firms are small having employees' up to 100 whereas 14 firms are medium and 2 firms large. It is explored from demographic data that most of the large firm form separated subsidiary firm to deal their capital market investment activities. The demographic analysis revealed that majority of the large firm has separated subsidiary firm who are responsible for their capital market investment related activities. In respect of age of the firms, around 90 percent firms are doing business for less than 10 years. After the circulation of BSEC notification around a decade ago, majority of the firms have incorporated as separate entity. Although 62 percent participants have less than or equal to 5 years capital market investment dealing experience which followed by six to ten years experienced professional (32%) and more than ten years experienced professional

(5%). Table 2.

Variables	Description	Percentage	Variables	Description	Percentage
Age of the Firms	Less than 1 year	1%	Online Social	Facebook	43%
	1-5 years	21%	Networks	YouTube	27%
	6 - 10 years	70%	platforms used	LinkedIn	12%
	11 - 15 years	6%		Google+	11%
	More than 15 years	3%		Pinterest	0%
No. of Years	Less than 1 years	27%		All	1%
dealing	1 -5 years	35%		Other	7%
investment	6-10 years	32%	Hardware used	Smartphone	35%
activities	11 - 15 years	4%	to access OSNs	Laptop	29%
	More than 15 Years	2%		Desktop	31%
No. of	Less than 30	40%		Tablet	2%
employees of	31 - 100	43%		All	2%
firm	101 - 170	11%		Other	0%
	171 - 240	1%			
	241 - 300	2%			
	More than 300	2%			

In respect of SNSs platform and hardware use, each institutional participant can use one or more SNSs platform and hardware. Around 43 percent of respondents use Facebook and 35 percent of institutional investors use smartphone in this survey (see Table 2). For data analysis purpose, all the demographic factors were considered as control variables.

4.2 Measurement model

Bagozzi et al. (1991) asserted that internal reliability and convergent validity of measurement model should be tested before examining the hypothesized relationship. Cronbach's alpha and composite reliability are generally used to evaluate the internal reliability. Composite reliability and Cronbach's alpha should have value greater than 0.70 in order to satisfy the requirement of reliability. "Convergent validity is considered to be satisfactory when measurement constructs have an average variance extracted (AVE) of at least 0.50 and items loading are above 0.70" (Hair et al., 1995).

Table 3.

Measurement Model

Constructs	Cronbach's Alpha	CR	AVE
Environmental factors	0.861	0.915	0.782
Intention to use SNSs	0.886	0.929	0.814
Organizational factors	0.734	0.848	0.651

AVE=Average Variance Extracted; CR=Composite Reliability

Composite reliability, Cronbach's alpha and average variance extracted (AVE) were presented in table 3 while the item loading for each construct in a bold format were shown in table 5. The values of Cronbach's alpha varied from 0.734 to 0.886, and composite reliability varied from 0.848 to 0.929 which fulfill the criteria of internal reliability.

Table 4.

Correlation matrix, Square root of AVE

	EF	IT SN	OF
EF	0.884		
IT SN	0.728	0.902	
OF	0.545	0.514	0.807

Note: IT SN= Intention to use SNSs ; EF= Environmental factors; OF= Organizational Factors

The values of item loading are ranged from 0.739 to 0.920 and AVE ranged from 0.814 to 0.651 that indicates the values are above the recommended level. Therefore, the manifest variables satisfy the convergent validity criteria.

Table 5.

Cross Loadings				
	EF	IT SN	OF	
EF1	0.862	0.583	0.438	
EF2	0.880	0.680	0.485	
EF3	0.911	0.663	0.517	
IT SN1	0.688	0.893	0.482	
IT SN2	0.607	0.920	0.419	
IT SN3	0.668	0.893	0.483	
OF1	0.479	0.226	0.739	
OF2	0.395	0.610	0.805	
OF3	0.461	0.339	0.871	

Note: IT SN= Intention to use SNS; EF= Environmental factors; OF= Organizational

factors

On the other hand, two test were used to check the discriminant validity. First, "the correlations among constructs should be below the cut-off of 0.85" (Kline, 2005). Second, "the square root of AVE should exceed the correlations of a construct with other latent constructs in the model" (Fornell and Larcker, 1981). The values generated from software indicated that the square roots of AVE were greater than their corresponding correlation and all the correlations among latent constructs are within the cut-off point of 0.85 (Table 4). This indicated the criteria for discriminant validity is satisfied and the research model meets the criteria for measurement model.

4.3 Structural model

4.3.1 Assessment of variance explanation through model

The research model explains variance meaningfully. It is found that the predicting power (R^2) of dependent variable such as intention to use SNSs was 0.550 and organizational factors were 0.297. Falk and Miller (1992) recommended that the value of R^2 should be above of 0.10 and the research outcomes show values above the criterion. The model explains 55.0 percent of the variance in the intention to use SNSs and 29.7 percent of variance of organizational factors in the adoption of SNSs among institutional investors (see Figure 2).

Table 6.

Predictive Relevance

EF 297.000 297.000	550/550/
IT SN 297.000 174.186 0.414	
OF 297.000 244.311 0.177	

Furthermore, we also tested predictive relevance (Q2) to examine the substantive impact of our research model. We followed Cohen's (1988) to examine the predictive relevance (Q2) (Garson, 2016). Cohen's (1988) suggested 0.02 represents a "small", 0.15 represents a "medium" and 0.35 represents a "high" effect size respectively. The research model suggested that intention to use SNSs (Q2 = 0.414) had large and organizational factors (Q2 = 0.177) had medium effect size. The predictive relevance of this model is also confirmed from this outcome (see Table 5).

4.3.2 Hypotheses results

We engaged SmartPLS 3.0 version to check the hypothesized relationships. Figure 2 exhibits the perfect coefficient for hypothesized relationship. After examining the results generated from software, it is inferred four of four proposed hypotheses were supported. Environmental factors revealed the most influential predictor of intention to use SNSs among the institutional investors since its statistical value is $\beta = 0.642$, t =10.353, p < 0.001, so hypothesis H1 is accepted. H2 is also supported due to statistical value of $\beta = 0.165$, t =2.147, p < 0.05 and implies organizational factors has significant impact on intention to use SNSs. Interestingly, Newly proposed path from environmental factors to organizational factors is substantially significant since the statistical

result ($\beta = 0.545$, t = 5.825, p < 0.001) supported the hypothesis 3. In addition, another newly proposed hypothesis 4 is also accepted since the impact of environmental factors ($\beta = 0.642$, t = 10.353) is much higher than the impact of organizational factors ($\beta = 0.165$, t = 2.147). It implies that environmental factors have more impact on intention to use SNSs among the institutional investors than the organizational factors (see Table 7 for details). Table 7.

Hypothesis	Relationship	Std. Beta	t-statistics	P Values	Comments
H1	EF -> IT SN	0.642	10.353***	***	Supported
H2	OF -> IT SN	0.165	2.147*	0.033	supported
Н3	EF -> 0F	0.545	5.825***	***	Supported

Legend: p:significance: *p<0.05 ; ** p<0.01 ; ***p<0.001

Furthermore, we examined the substantive effect of this research model by using the recommended value of Cohen's (1988) effect size (f2). Effect size is defined as "the degree to which the phenomenon is present in population." Cohen's (1988) recommended f2 values for small, medium, and large effects are 0.02, 0.15, and 0.35 respectively. The research model disclosed that intention to use (f2 = 0.679) and organizational factors (f2 = 0.422) had a large effect size.



Figure 2. Validated Research model

5. Discussions

The proposed research determines significant support for the model regarding the environmental and organizational factors of social networking sites adoption among the institutional investors in Bangladesh. The finding indicates that environmental factors are most significant predictors of institutional investors' intention to use SNSs. It explores the socio economic scenario of Bangladesh where most of the organization must concern about the external factors in order to conduct business. This result is also consistent with Ngai (2006) and Zhu & Chang (2014) where they also found that environmental pressure is the main determinant to adopt the technologies in organization. The outcome indicates that organizational factors of the firms has influence on institutional investors' intention to use SNSs. This finding is concurrent with Munguatosha et al, (2011), Hoque and Sarwar (2017) and Tak and Panwar (2017) where they explored that organization attributes has positive impact on user intention to use technology in different settings.

Interestingly, the study explored that environmental factors has substantive effect on organizational factors. This finding supported the notion that when the organizations face pressure from external environment they motivate to develop their internal facilities. This reflects the socio economic scenario of Bangladesh where majority of the organization take initiative when they face pressure from environment.

More interesting result obtained from this study is that environmental factors have more influence on intention to use social networking sites than organizational factors. This result exhibit the practical view of social networking site adoption. Most of the time decision makers are influenced by their, coercive pressure. When they find their competitors are using a new technology, they will motivate to use that technology. Finally, the study confirmed the environmental and organizational factors have significant sway on social networking sites adoption among the institutional investors.

6. Contribution

This study will enrich the existing knowledge and provide imperatives for policy makers in different ways. This study used environmental and organizational factors as direct determinant of intention to use that will enrich the existing literature by incorporating these aspects in future studies. Though the existing studies used TOE in different context this study focused on environmental and organizational factors of TOE in different way. It proposed and empirically tested that environmental factors affect the organizational factors. Moreover, it empirically explored a new concept that environmental factors are more important than organizational factors that will enhance the future research. On the other side, the regulatory authority (e.g., Bangladesh Securities and Exchange Commission) will be benefited to formulate the policy regarding the adoption of social networking sites usage among the institutional investors. SNSs service provider can develop their platform for dissemination of information considering the environmental and organizational aspects of institutional user adoption capabilities and needs.

7. Conclusions, Limitation, and Future Research

This study is not beyond of limitations. Future study can use longitudinal data in order to check the result since this study used cross sectional data. Comparing individual data, it is difficult to access the institutional data. Hence, the study was able collect data from ninety-eight institutional investors. Hereafter, the generalizability of the findings for entire institutional investors may raise concerns due to small sample. Therefore, further research may extend the present study by increasing the number of respondents. This research focused on the environmental and organizational aspect only. The future study can extend this study including technological aspect. This research use convenience sampling procedure. Other study can use random sampling technique.

Overall the study properly determines the environmental and organizational factors of social networking sites (SNSs) use among the institutional investors in Bangladesh. It found environmental factors and organizational factors are important aspect to adopt social networking sites adoption among the institutional investors. It identified environmental factors has impact on organizational factors for adoption of SNSs. Moreover, it also explored that environmental factors are more important than organizational factors for adoption of SNSs among the institutional investors. This finding will provide valuable direction for future researchers and policy makers of capital market.

References

- Alarcon-del-Amo, M., Lorenzo-Romero, C. & Del Chiappa, G. (2014). Adoption of social networking sites by Italian. Information Systems and E-Business Management, 12(2), 165-187.
- Al-Qirim, N. (2006). The role of government and e-commerce adoption in small businesses in New Zea-land. International Journal of Internet and Enterprise Management, 4(4), 293-313.
- Bagozzi, R.P., Yi, Y. & Phillips, L.W. (1991), Assessing construct validity in organizational research, Administrative Science Quarterly, 36, 421-458.
- Bharati, P., Zhang, C., & Chaudhury, A. (2014). Social media assimilation in firms: Investigating the roles of absorptive capacity and institutional pressures. Information Systems Frontiers, 16(2), 257–272. https://doi.org/10.1007/s10796-013-9433-x
- Boyd, D.M. & Ellison, N.B. (2007). Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13 (1), 210-230.
- Chatterjee, D., Grewal, R., & Sambamurthy, V. (2002). Shaping up for e-commerce: Institutional enablers of the organizational assimilation of web technologies. MIS Quarterly, 26(2), 65-89.
- Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Mahwah, NJ: Lawrence Erlbaum.
- Cohen J, Cohen P, West S G & Aiken L S. (2013). Applied multiple regression/correlation analysis for the behavioral sciences. Australia: Routledge;.
- Cross, R., Parker, A., Borgatti, S.P., (2002). A Bird's-eye View: Using Social Network Analysis to Improve Knowledge Creation and Sharing. IBM Institute for Knowledge-Based Organizations
- Davis, F.D., Bagozzi,R.P. & Warshaw,P.R.(1989). User acceptance of computer technology: a comparison of two theoretical models. Manage Sci.35, 982–1003
- DeLone, W.H. & McLean, E.R., (1992). Information Systems Success: The Quest for the Dependent Variable. Information Systems Research, 3, 60–95. https://doi.org/10.1287/isre.3.1.60

- Dewan, S. & Michael, S.C. (1998). Firm characteristics and investments in information technology: scale and scope effects, Information Systems Research, Vol. 9 No. 3, pp. 219-32.
- DiMaggio, P. & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. American Sociological Review 8(2), 147-160.
- Donelan, H. (2015). Social media for professional development and networking opportunities in academia, Journal of Further and Higher Education, 40(5), 706-729
- Du, W. (Derek), Wu, J., Liu, S., & Hackney, R. A. (2019). Effective organizational improvisation in information systems development: Insights from the Tencent messaging system development. Information & Management, 56(4), 614–624. https://doi.org/10.1016/j.im.2018.10.003
- El Haddadeh, R., Weerakkody, V., & Peng, J. (2012). Social networking services adoption in corporate communication: the case of China. Journal of Enterprise Information Management, 25(6), 559 - 575. https://doi.org/10.1108/17410391211272838
- Falk, R.F.& Miller, N.B. (1992). A Primer for Soft Modeling. University of Akron Press.
- Fornell, C. & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. J. Market. Res. 39–50.
- Gatignon, H. & Robertson, T.S. (1989). Technology diffusion: an empirical test of competitive effects", Journal of Marketing, 53(1), 35-49.
- Garson, G. D. (2016). Partial least squares: Regression & structural equation models. Asheboro, NC: Statistical Associates Publishers
- Iacovou, C.L., Benbasat, I. & Dexter, A.S. (1995). Electronic data interchange and small organisations: adoption and impact of technology. MIS Quarterly, 19(4), 465-85.
- Indushobha, C.S. & Duchessi, P. (1999). The initiation and adoption of client-server technology in organisations. Information & Management, 35, 77-88.
- Jeyaraj, A., Rottman, J., & Lacity, M. (2006). A review of the predictors, linkages, and biases in IT innova-tion adoption research. Journal of Information Technology, 21(1), 1-23.
- Jung, M. J., Naughton, J. P., Tahoun, A., & Wang, C. (2015). Corporate Use of Social Media. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2588081
- Hair Jr JF, Anderson RE, Tatham RL & William C. (1995). Multivariate data analysis with readings. New Jersy: Prentice Hall
- Hoppen, N., & Bobsin, D. (2015.) Institutional pressures for the adoption of Organizational Virtual Social Networks.12. How social Media shape the institutional investors decision process
- Hoque, R. & Sorwar, G. (2017). Understanding factors influencing the adoption of mHealth by the elderly: An extension of the UTAUT model. International Journal of Medical Informatics, 101, 75–84. https://doi.org/10.1016/j.ijmedinf.2017.02.002
- Howell, D.W. (2016). Social media site use and the technology acceptance model: social media sites and organization success, Doctoral dissertation, available at: www.proquest.com
- Hsu, C.; Lin, Y.T. & Wang, T. (2014) A legitimacy challenge of a cross-cultural interorganizational information system. European Journal of Information Systems, pp.1-17.
- Karoui, M., Dudezert, A., & Leidner, D. E. (2015). Strategies and symbolism in the adoption of organizational social networking systems. The Journal of Strategic Information Systems, 24(1), 15–32. https://doi.org/10.1016/j.jsis.2014.11.003
- Kauffman, R., & Walden, E. (2001). Economics and electronic commerce: Survey and directions for re-search. International Journal of Electronic Commerce, 5(4), 5-116
- Kline, R.B. (2005). Principles and Practice of Structural Equation Modeling, Guilford Publications
- Kowath, N., & Choon, T. (2001) Determinants of website development: A study of electronic commerce in Singapore. Information & Management, 39(3), 227-242.

- Kripanont, N. (2007). Examining a technology acceptance model of internet usage by academics within Thai business schools, Doctoral dissertation, available at: http://vuir.vu.edu.au/1512/1/Kripanont.pdf
- Kuan, K.K.Y. & Chau, P.Y.K. (2001). A perception-based model for EDI adoption in small businesses using a technology-organisation-environment framework. Information & Management, 38(8), 507-21.
- Liang, Saraf, Hu, & Xue. (2007). Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management. MIS Quarterly, 31(1), 59. https://doi.org/10.2307/25148781
- Liang, T., You, J., & Liu, C. (2010). A resource based perspective on information technology and firm performance: a meta-analysis. Industrial Management & Data Systems, 110(8), 1138 – 1158. https://doi.org/10.1108/0263557101107780
- Lind, M.R., Zmud, R.W. and Fischer, W.A. (1989). Microcomputer adoption the impact of organisational size and structure", Information & Management, 16,157-62.
- Luo, X., Zhang, J., & Duan, W. (2013). Social Media and Firm Equity Value. Information Systems Research, 24(1), 146–163. https://doi.org/10.1287/isre.1120.0462
- McKinsey (2007). How Companies are Marketing Online. In: The McKinsey Quarterly
- Macmillian, I. (1982) Seizing competitive initiatives. Journal of Business Strategy, 2(4) (Spring), 45-49.
- Mikalef, P., Giannakos, M. & Pateli, A. (2012). Exploring the Business Potential of Social Media: An Utilitarian and Hedonic Motivation Approach. BLED 2012 Proceedings. 21.http://aisel.aisnet.org/bled2012/21
- Munguatosha, M. G., Muyinda, B P., & Lubega, T.J. (2011). A social networked learning adoption model for higher education institutions in developing countries. On the Horizon, 19(4), 307–320. https://doi.org/10.1108/10748121111179439
- Ngai, M. E.W.T. (2006). Predicting the organisational adoption of B2C e-commerce: an empirical study, Industrial Management & Data Systems, 106(8), 1133 - 1147
- O'Dell,J. (2010). Is Facebook Getting Bigger Than Google? [STATS]" available at https://mashable.com/video/realcheese-or-fake/ Accessed on 01/08/2019
- Palmer, J.C. & Strickland, J. (2017). Academic social networking websites: a guide tomanaging your online presence, available at: www.apa.org/science/about/psa/2017/02/academic-social-networking.aspx
- Petersen, L. (2019). Role of Social Media in Organizations. Available at https://smallbusiness.chron.com/rolesocial-media-organizations-30678.html. Accessed on 03/08/2019
- Power, J. D. (2013) Poor social media practices can negatively impact a businesses' bottom line and brand image. http://www.jdpower.com/sites/default/files/2013006-smbs.pdf. Accessed 24 June 2019
- Ravichandran, T. & Lertwongsatien, C. (2005). Effect of information systems resources and capabilities on firm performance: a resource-based perspective. Journal of Management Information Systems, 21 (4), 237-76.
- Raymond, L., & Blili, S. (1997) Adopting EDI in a network organization: The case of subcontracting SMEs. European Journal of Purchasing and Supply Management, 3(3), 165-175.
- Sabherwal, R., Jeyaraj, A., & Chowa, C. (2006). Information system success: Individual and organizational determinants. Management Science, 52(12), 1849-1864.
- Scott, W. R. (2008). Institutions and Organizations: Ideas and Interests, Los Angeles, CA: Sage Publication
- Scott, W.R. (2014). Institutions and Organizations: Ideas, Interests and Identities, 4th edition, Sage Pub.
- Schlagwein, D., & Hu, M. (2017). How and why Organisations Use Social Media: Five Use Types and their Relation to Absorptive Capacity. Journal of Information Technology, 32(2), 194–209. https://doi.org/10.1057/jit.2016.7
- Scupola, A. (2009). SMEs' e-commerce adoption: Perspectives from Denmark and Australia. Journal of Enterprise Information Management, 22(1/2), 152-166.
- Shaw, H., Ellis, D. A., & Ziegler, F. V. (2018). The Technology Integration Model (TIM). Predicting the continued use of technology. Computers in Human Behavior, 83, 204–214. https://doi.org/10.1016/j.chb.2018.02.001

Sinclaire, J. K., & Vogus, C. E. (2011). Adoption of social networking sites: an exploratory adaptive structuration

perspective for global organizations. Information Technology and Management, 12(4), 293–314. https://doi.org/10.1007/s10799-011-0086-5

- Srinivasan, R., Lilien, G.L. & Rangaswamy, A. (2002). Technological opportunism and radical technology adoption: an application to e-business, Journal of Marketing, 66(3), 47-60.
- Stanko, T., & Sena, J. A. (2017). Exploring the Impact of Social Networking on Communication in Organizations. Journal of Computer Information Systems, 1–10. https://doi.org/10.1080/08874417.2017.1365667
- Staw, B. M. & Epstein, L. D. (2000). What Bandwagons Bring Effects of Popular Management Techniques on Corporate Performance, Reputation and CEO Pay. Administrative Science Quarterly, 45(3), 523-556.
- Tak, P., Panwar, S. (2017). Using UTAUT 2 model to predict mobile app based shopping: evidences from India. Journal of Indian Business Research, 9, 248–264. https://doi.org/10.1108/JIBR-11-2016-0132
- Teo, Wei, & Benbasat. (2003). Predicting Intention to Adopt Interorganizational Linkages: An Institutional Perspective. MIS Quarterly, 27(1), 19. https://doi.org/10.2307/30036518
- Tornatzky, L., & Fleischer, M. (1990). The process of technology innovation. Lexington, M.A: Lexington Books.
- Venkatesh, V., Thong, J. & Xu, X., (2016). Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead. Journal of the Association for Information Systems, 17(5), 328–376. https://doi.org/10.17705/1jais.00428
- Venkatesh, V., Thong, J.Y.L. & Xu, X. (2012). Consumer acceptance and use of information Technology: extending the unified theory Of acceptance and use of technology. MIS Quarterly, 36, 157–178.
- Venkatesh,V., Morris, M.G., Davis, G.B. & Davis, F.D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly 27, 425-478. https://doi.org/10.2307/30036540
- Warrts, E., Van Everdingen, Y.M. & Hillegersberg, J. (2002). The dynamics of factors affecting the adoption of innovations, The Journal of Product Innovation Management, 19,412-23.
- Weerasinghe,S., Chandanie,M & Hindagolla,B. (2018). Technology acceptance model and social network sites (SNS): a selected review of literature, Global Knowledge, Memory and Communication, 67 (3),142-153, https://doi.org/10.1108/GKMC-09-2017-0079
- Wood,K. (2014). 5 Companies that have Nailed Social Media for Recruiting. Available at https://www.tintup.com/blog/5-companies-that-have-nailed-social-media-for-recruiting/ Accessed on 03/08/209
- Zhu, K., Kraemer, K., & Xu, S. (2003). A cross-country study of e-business adoption using the technologyorganization-environment framework. Proceedings of the International Conference on Information Systems, Barcelona, Spain.
- Zhu, D. H. & Chang, Y. P. (2014) Understanding motivations for continuance intention of online communities in China: a comparison of active users of social networking sites and virtual communities. Information Development, 30(2), 172-180.